We claim:

1. Manufacturing method of electrodes for lithium based electrochemical devices, in which a length of a metal grid is dip-coated by an active material slurry, and said length is then pulled vertically upward through a solidification chamber, in which said dip-coating is solidified.

2. Manufacturing method of electrodes for lithium based electrochemical devices, in which a length of an expanded metal foil is dip-coated by an active material slurry, and said length is then pulled vertically upward through a solidification chamber, in which said dip-coating is solidified.

3. Manufacturing method of electrodes for lithium based electrochemical devices, in which a length of a perforated metal foil is dip-coated by an active material slurry, and said length is then pulled vertically upward through a solidification chamber, in which said dip-coating is solidified.

4. Manufacturing method of electrodes for lithium based electrochemical devices, in which a length of a solid metal foil is dip-coated by an active material slurry, and said length is then pulled vertically upward through a solidification chamber, in which said dip-coating is solidified.

5. Manufacturing method of electrodes for lithium based electrochemical devices, as described in claim 1, in which said length of said grid is treated by a solvent resistant and electrically conductive primer, prior to said dip-coating.

6. Manufacturing method of electrodes for lithium based electrochemical devices, as described in claim 2, or 3, or 4, in which said length of said foil is treated by a solvent resistant and electrically conductive primer, prior to said dip-coating.

7. Manufacturing method of electrodes for lithium based electrochemical devices, as described in claims 1, or 2, or 3, or 4, in which said slurry includes at least two solvents, a carbon black and a polymer binder.

8. Manufacturing method of electrodes for lithium based electrochemical devices, as described in claim 7, in which said solvents include acetone in the range of 42 to 54 weight % (percent) and N-methylpyrrolidinone in the range of 6 to 23 weight % (percent), said polymer binder is polyvinyldiene fluroride homopolymer in the range of 1 to 8 weight % (percent), said active material is in the range of 24 to 37 weight % (percent), and said carbon black is in the range of 1 to 8 weight % (percent).

9. Manufacturing method of electrodes for lithium based electrochemical devices, as described in claim 5 or 6, in which said primer is a mixture of a solution of lithium polysilicate in water and a carbon black.

10. Manufacturing method of electrodes for lithium based electrochemical devices, as described in claim 5 or 6, in which said primer is a mixture of a carbon black and a solution of polyvinyldiene fluoride homopolymer in at least two solvents.

11. Manufacturing method of electrodes for lithium based electrochemical devices, as described in claim 5 or 6, in which said length has masked areas of intended terminal tabs by solvent resistant adhesive tapes, prior to said primer treatment, and said adhesive tapes are removable.

12. Manufacturing method of electrodes for lithium based electrochemical devices, as described in claim 1, or 2, or 3, or 4, or 5, or 6, which additionally includes an electrode cleaning step of intended terminal tabs area by buffing and vacuuming after said coating.

13. Manufacturing method of electrodes for lithium based electrochemical devices, as described in claim 1, or 2, or 3, or 4, or 5, or 6, which additionally include an electrode cleaning step of the intended terminal tab area by sand blasting and vacuuming after said coating.

14. Manufacturing method for lithium based electrochemical devices, as described in claim 5, or 6, in which said primer is a mixture of a solution of lithium polysilicate in water and a carbon black, and a said length is dip-coated by said primer and is pulled over a roller horizontally after dipping while hot air is applied on said coating.

15. Electrode structure for lithium based electrochemical devices, which includes a metal grid and an electrode material coating on said grid, the improvement therein said grid is embedded in the middle of said coating by a dip-coating method.

16. Electrode structure for lithium based electrochemical devices, which includes an expanded metal foil, and an electrode material coating on said foil, the improvement therein said foil is embedded in the middle of said coating by a dip-coating method.

17. Electrode structure for lithium based electrochemical devices, which includes a perforated metal foil and an electrode material coating on said foil, the improvement therein said foil is embedded in the middle of said coating by a dip-coating method.

18. Electrode structure for lithium based electrochemical devices, which includes a solid metal foil and an electrode material coating on said foil, the improvement therein said foil is embedded in the middle of said coating by a dip-coating method.

19. Electrode structure for lithium based electrochemical devices, as described in claim 15, or 16, or 17, or 18, in which said grid or foil is treated by a solvent resistant and electrically conductive primer before said coating.